

sharp upper border. Dorsal space light leaf green, an irregular, but distinct geminate, shaded greenish white dorsal band, broadening out and filling in all the dorsal space on joints 2 to 4, still obscurely darker centered. All the space below the subdorsal line likewise completely filled in with the same greenish white, with the paler secondary dots. Spiracles white with a median brick red band, except the one on joint 5 which is white with a black spot at its posterior side. The side color of the body is cut by darker green oblique shades which run from the posterior edge of each segment on the sub-stigmatal line upward and forward (in the reverse direction from what is usual in Sphingidae) each confined to a single segment, on joints 5 to 11. A substigmatal line is distinct from the anal feet forward to joint 11, white and yellow like the subdorsal line and also shaded with pink. Forward of joint 11 it becomes faint and is scarcely distinguishable in front of joint 8. Horn pointed, green, with black spinules, the apex pale. Head dark green with narrow, obscure, vertical, pale bands; antennae pinkish; width about 2.5 mm.; length of horn 4 mm.; of the larva 28 mm. The food plant of this tiny Sphinx is the "wax berry," *Chiococca racemosu*, determined for me by Mr. F. Kinzel. The imago appeared in six weeks. Larvae from Lake Worth, Florida.

#### THE NEW CATALOGUE OF BEES.

Catalogus Hymenopterorum, Vol. X, Apidae (Anthophila). By Dr. C. G. De Dalla Torre, 1896, pp. 643.

All students of bees must gratefully welcome this admirable catalogue, which gives not only the names of the species, but the localities and all the more important references. It is practically complete up to the end of 1893, but various species described in 1894 from America are omitted, though one would suppose that there might have been time to include them before print-

ing. Of course, as is inevitable in such a work, the details suggest much criticism and comment. Very strangely, Wm. Kirby is in many places called W. F. Kirby, although the latter name is rightly the property of a much more recent entomologist, still happily with us. *Andrena* is modified to *Anthrena*, and *Heriades* to *Eriades*, but it is questionable whether such changes can be accepted. *Anthophora* becomes *Podalirius*, apparently on good grounds of priority. Our *Colletes punctata* Rob. (nom. preocc.) becomes *C. robertsonii* D. T. Our *Halictus cephalicus* Rob. (nom. preocc.) becomes *H. cephalotes* D. T., although there was already a nomen nudum *H. cephalotes* Schill., 1839. *H. distinctus* Prov. (preocc.) becomes *distinguendus* D. T. *H. gracilis* Rob. (preocc.) is altered to *gracillimus*, but Mr. Robertson had already changed the name to *foxii*. *H. palustris* Rob. is also altered to *paludicola*, in ignorance of Mr. Robertson's substitution of *nymphacarium* last year. *H. constrictus* Prov. (preocc.) becomes *provancheri* D. T. It may here be observed that Mr. Robertson substituted *H. macoupiensis* for his *H. quadrimaculatus*, "nec Schenk"; but it appears that Schenk's species is a synonym of *H. interruptus*. Our *H. fulvipes* Sm. (preocc.) becomes *rhododactylus* D. T.

Our *Andrena fimbriata* Sm. (preocc.) becomes *americana* D. T. *A. simulata* Prov. is altered to *canadensis*. *A. clypeata* Sm. becomes *clypeolata* D. T. *A. laticeps* Prov. becomes *provancheri*. *A. scrotina* Rob. becomes *robertsonii*. *A. salicis* Rob. was preoccupied by *salicis* Verhoeff; but the latter name is a synonym of *albicans*. *A. scutellaris* Rob. becomes *scutellata* D. T. *Nomia punctata* Fox (preocc.) is altered to *N. foxii* D. T.

*Eunomia* is not held to be distinct from *Nomia*. *Cilissa* is made a synonym of *Mellitta*. *Eucera* is made to include, as subgenera, *Diadasia*, *Emphor*, *Melissodes*,

Synhalonia, Tetralonia, Xenoglossa, etc., but it seems impossible to accept such wholesale lumping.

*Melissodes tristis* Ckll. is much later than *Eucera tristis* Mor., but I do not care to rename it until convinced that it is desirable to merge *Melissodes* in *Eucera*. *Eucera arctos* n. n. is founded on *ursina* Cr., not of Haliday, but the name is unnecessary, since *ursina* is a synonym of *enavata*. *M. brevicornis* Cr. becomes *E. cressonii*. *M. californica* Sm. becomes *E. smithii*.

Podalirius (Anthophora) is made to include as subgenera, *Clisodon*, *Entechnia*, *Habropoda*, etc. *Habropoda mucida* is changed to *P. cressonii*. *Anth. carbonaria* Cr. becomes *P. infernalis*. Our *Nomada rubra* Prov. becomes *N. erythraea* D. T. *N. integra* Rob. becomes *N. integerrima* D. T. *N. punctata* Cr. becomes *N. provancheri* D. T. *Chelostoma* is treated as a subgenus of *Eriades*. *Osmia quadridentata* Cr. becomes *cressonii* D. T., but this change is unnecessary, since it is a synonym of *O. conjuncta* Cr. *O. parva* Prov. becomes *O. parvula* D. T. *Megachile carbonaria* Cr. becomes *M. cressonii*. Mr. Fox's three Jamaican species of *Megachile* are wrongly said to be from Indiana. *M. simplex* Prov. becomes *M. simplicissima* D. T. *Anthidium venustum* Cr. becomes *cressonii*. *Coelioxys brevis* Cr. becomes *C. cressonii*, but the author overlooks the fact that *Cresson* himself long ago changed the name to *altilis*. *Phileremus* is changed to *Ammobates*, which has priority of place on the same page of Latreille. The name *Ammobates* has been very frequently used in Europe for many years. Although the papers of Robertson and Coville are duly quoted under *Psithyrus* (or *Apathus*) *elatus*, the author did not examine them sufficiently to learn that the insect in question was a ♂ *Bombus*. *Trigona* and *Tetragona* are given as subgenera of *Melipona*. *Trigona nigra* Cr. becomes *M. cressonii* D. T. *Apis mellifica* L., 1761, is to be called *A. mellifera* L., 1758.

It must be confessed that it is not entirely creditable to our knowledge of the literature of our subject, that the author of this new catalogue has been able to supersede so many names of American species on grounds of preoccupation. It is fair to state, however, that in some instances we were aware of the prior names, and changes would have been proposed on this side of the water sooner or later. In a few cases the changes had actually been made, and our author was not aware of it.

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New Mexico Agric. Exper. Station,

March 3, 1896.

#### CHRYSOBOTHRIS FEMORATA AND CLERUS 4-GUTTATUS.

Wood piles are always attractive collecting spots. *Chrysobothris femorata* Fab. is a frequent visitor, and runs about very briskly, especially on hickory and oak logs. Early in June, 1894, a specimen of *femorata* was seen and heard to produce a very distinct noise by striking rapidly with the end of its abdomen on the bark of an oak log. Tapping with the finger nail seemed to attract other *Chrysobothris* on the same log, but it may have been only a coincidence. Unfortunately the tapping specimen could not be caught to determine its sex, but it was probably a male, and the tapping a call or challenge. Last summer no opportunity occurred of observing *Chrysobothris*, but so common a species offers a good chance for all interested to make further observations on this interesting tapping habit.

On the 16th of June, 1895, on a fresh spruce log was noticed a specimen of *Clerus 4-guttatus* Oliv. It had in its grasp a good-sized Scolytid, either *Nyleborus* or *Tomicus*. It held the victim with its front and middle legs, and kept turning it round and round, biting at it all the time, and raising itself on its hind legs. Finally it seized the Scolytid firmly beneath where